(DOD PHOTO)

WSTIAC

Weapon Systems Technology Information Analysis Center

The Weapon Systems Technology Information Analysis Center (WSTIAC) is a premier source of products in weapon-systems technology information and analysis to support today's decisions for tomorrow's warfighters. WSTIAC is an integrated support activity dedicated to increasing the scientific and engineering productivity of the US Department of Defense (DoD) research community. WSTIAC is a single point of contact for all information about conventional and Directed-Energy Weapons (DEWs), their development, production, fielding, and maintenance.

WSTIAC monitors and extracts information on the science, technology, and acquisition of conventional and DEWs systems technology. This includes related guidance, intelligence-gathering systems, training, analyses, databases, model repositories, laboratory studies, testing, hardware, components, systems, and subsystems. WSTIAC provides DoD and user communities with timely and authoritative information on key Research & Development (R&D) concepts, results, and trends; applications and processes; and assessment of international R&D technology:

- Weapons (missiles, rockets, munitions, submunitions, bombs, projectiles, guns, mines, torpedoes, *etc.*)
- Weapon Platforms (aircraft, satellites, ground vehicles, ships, undersea vehicles, *etc.*)
- Weapon Components (sensors, seekers, guidance systems, fuzes, warheads, control systems, *etc.*)
- Enabling technologies Global Positioning System, miniaturization, imaging, target recognition, aerodynamics, electronics, photonics, inertial navigation, *etc.*

WSTIAC develops, presents, and maintains training courses on a cost-recovery basis to transfer conventional and DEWs technology to the technical community. Currently, WSTIAC offers courses on the following:

- **Smart/Precision Weapons** provides a comprehensive understanding of smart weapons and related technologies on selected US and foreign smart weapons, including system description, concept of employment, performance characteristics, and effectiveness and program status.
- **Sensors and Seekers for Smart Munitions and Weapons** provides an introduction to the most commonly used sensors and seekers in smart munitions and weapons (projectiles, missiles, and wide-area mines).
- **Weaponeering** provides an overview of the fundamentals of probability computations for determining the quantity of weapons

required to achieve a specific level of damage to a given target. These considerations include target vulnerability, weapons effect, accuracy of munitions delivery, damage criteria, probability of kill, and weapons' reliability and application to air-to-surface and surface-to-surface engagements.

- **DEWs** provides an introduction to the basic principles and techniques of DEWs and discusses key DEW programs in High-Energy Lasers and High-Power Microwaves.

TECHNICAL PUBLICATIONS

WSTIAC keeps the user community abreast of weapons-systems technology by publishing technical reports such as State-of-the-Art Reports (SOARs). These technical reports are carefully selected to meet the most pressing needs of users.

CURRENT AWARENESS

WSTIAC publishes a quarterly newsletter and maintains a Web site. An electronic copy of the newsletter is available on the WSTIAC home page at **http://wstiac.alionscience.com.** WSTIAC also conducts conferences, symposia, workshops, and other meetings to collect, analyze, and disseminate weapon-systems technology information.

INQUIRY SUPPORT

WSTIAC offers free inquiry support to users by drawing on its multiple databases, its information repositories, and its technical Subject Matter Experts (SMEs).

TECHNICAL AREA TASKS

WSTIAC is available to assist DoD organizations and industry by conducting Technical Area Tasks (TATs) on a cost-recovery basis. WSTIAC can conduct analytical or/or experimental TATs, conduct trade studies, develop and demonstrate prototype hardware, and provide interdisciplinary technical support on a wide variety of topics related to weapons technology and systems:

- Conventional and DEW Systems-Development Technology Components
- Analytical Test Techniques
- Component Design Criteria
- Conventional and DEW Systems Technology Components Analysis
- Design and Analysis of Computational Techniques, Databases, and Software and Hardware
- Environmental Protection
- Instrumental and Seeker Test Support
- Materials Applications Analysis Specifically Related to Conventional and DEW Systems Technology Components
- Military Systems and Supporting Equipment Development Analysis
- Operational Serviceability
- Phenomenology
- Special Test Equipment and Techniques
- Subsystems and Systems Simulation Modeling and Analysis
- Theoretical Performance Computations

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